

What is claimed is:

1. A system for analyzing noise comprising:

an error information storage unit storing threshold
5 values of malfunction factors that create a malfunction
of a victim receiver cell due to a noise;

an error criterion generation section which selects
the threshold values from the error information storage
unit, and generates an error criterion according to the
10 victim receiver cell by plotting the threshold values and
conducting the threshold values smooth processing on;

a noise analysis section configured to measure the
malfunction factors; and

a comparison section configured to compare the
15 measured malfunction factors to the error criterion, and
to judge whether the noise will create a malfunction of
the victim receiver cell when the malfunction factors
meet the error criterion.

20 2. The system of claim 1, wherein the error information
storage unit stores at least one of the noise voltage in
a rising signal transmitted to the victim receiver cell,
the noise duration in a rising signal transmitted to the
victim receiver cell, the noise voltage in a falling
25 signal transmitted to the victim receiver cell, the noise
duration in a falling signal transmitted to the victim

receiver cell, and the victim receiver cell load capacity as the threshold values.

3. The system of claim 1, further comprising a net analysis
5 section configured to distinguish a net through which a clock signal is propagated from another net through which a general signal other than the clock signal is propagated and to order the error criterion generation section to eliminate the error criterion relating to the malfunction
10 factors generated in the rising and falling signals propagated through the net through which the general signal is propagated.

4. The system of claim 2, further comprising a net analysis
15 section configured to distinguish a net through which a clock signal is propagated from another net through which a general signal other than the clock signal is propagated and to order the error criterion generation section to eliminate the error criterion relating to the malfunction
20 factors generated in the rising and falling signals propagated through the net through which the general signal is propagated.

5. The system of claim 1, further comprising an error
25 criterion analysis section configured to analyze a plurality of the error criteria ordering to eliminate an

included error criterion when any one of a plurality of error criteria is included in another error criterion.

6. The system of claim 2, further comprising an error criterion analysis section configured to analyze a plurality of the error criteria ordering to eliminate an included error criterion when any one of a plurality of error criteria is included in another error criterion.

7. The system of claim 1, further comprising a logic connection information analysis section configured to select a signal which causes the victim receiver cell to operate from among the falling and rising signals and to order the error criterion generation section to eliminate the error criterion relating to the malfunction factors created in the signal that is different from the selected signal.

8. The system of claim 2, further comprising a logic connection information analysis section configured to select a signal which causes the victim receiver cell to operate from among the falling and rising signals and to order the error criterion generation section to eliminate the error criterion relating to the malfunction factors created in the signal that is different from the selected signal.

9.The system of claim 1, further comprising:

a logic connection information input unit
configured to transmit data to be designed for a layout
5 pattern of a logic circuit; and

a simulation executing section configured to
simulate waveforms of the noise and the signal in the
logic circuit.

10 10.The system of claim 2, further comprising:

a logic connection information input unit
configured to transmit data to be designed for a layout
pattern of a logic circuit; and

a simulation executing section configured to
15 simulate waveforms of the noise and the signal in the
logic circuit.

11.The system of claim 3, further comprising:

a logic connection information input unit
20 configured to transmit data to be designed for a layout
pattern of a logic circuit; and

a simulation executing section configured to
simulate waveforms of the noise and the signal in the
logic circuit.

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12.The system of claim 5, further comprising:

a logic connection information input unit configured to transmit data to be designed for a layout pattern of a logic circuit; and

5 a simulation executing section configured to simulate waveforms of the noise and the signal in the logic circuit.

13. The system of claim 7, further comprising:

10 a logic connection information input unit configured to transmit data to be designed for a layout pattern of a logic circuit; and

a simulation executing section configured to simulate waveforms of the noise and the signal in the logic circuit.

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14. A computer implemented method for analyzing noise comprising:

20 generating an error criterion according to the victim receiver cell by plotting the threshold values and conducting the threshold values to smooth processing on;

measuring the malfunction factors;

comparing the measured malfunction factors to the error criterion; and

25 judging whether the noise creates a malfunction of the victim receiver cell when the malfunction factors meet the error criterion.

15. The method of claim 14, further comprising:

distinguishing a net through which a clock signal is propagated from another net through which a general
5 signal other than the clock signal is propagated; and

eliminating the error criterion relating to the malfunction factors created in the rising and falling signals propagated through the net through which the general signal is propagated.

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16. The method of claim 14, further comprising ordering elimination of the included error criterion when any one of a plurality of error criteria is included in another error criterion.

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17. The method of claim 14, further comprising:

selecting a signal that causes the victim receiver cell to operate from among falling and rising signals; and

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eliminating the error criterion relating to the malfunction factors generated in the signal that is different from the selected signal.

18. The method of claim 14, further comprising:

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transmitting data of a layout pattern of a logic circuit to be designed; and

simulating waveforms of the noise and the signal
in the logic circuit.

19. The method of claim 15, further comprising:

5 transmitting data of a layout pattern of a logic
circuit to be designed; and

 simulating waveforms of the noise and the signal
in the logic circuit.

10 20. The method of claim 16, further comprising:

 transmitting data of a layout pattern of a logic
circuit to be designed; and

 simulating waveforms of the noise and the signal
in the logic circuit.

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